solispost®



SMART INTELLIGENT SOLAR POWERED STREET FURNITURE

UK PATENT APPLICATION NO. 1515614.4 PENDING

SOLISPOST ILLUMINATED BOLLARD TECHNICAL SPECIFICATION

KEY FEATURES

Zero energy costs

Solar energy harvested from four vertical faces totalling 102,300mm2

Lead acid battery with a lifetime of up to 5 years. High performance white LED 180 lumens per watt with 71° beam.

14 Days autonomy (without daylight)20 Days battery life in transport modePIR sensors trigger LED bright-up on approach

SOLISPOST CONTROL SYSTEM

The Solispost control system uses a four channel dynamic boost algorithm to maximise the power generated from each individual solar panel. During the day the light tracks across the Solispost, illuminating and shading the panels. To capture energy efficiently from direct and indirect sunlight, the optimum power point of the panels is calculated in real time and the charge taken from the panels is adjusted, harvesting the maximum power from each panel.

> The battery is charged throughout the day from the energy harvested from the solar panels. The Solispost control system has battery management technology which mitigates full discharge



by reducing the LED brightness till there is sufficient ambient light to charge. To maintain battery levels during transportation a low power mode can be initiated by briefly placing a magnet against the Solispost, once installed the magnet is used again to activate ready for use.

The Solispost control system monitors the ambient light levels, anticipating the transition from day to night. The automatic transition allows for seasonal changes in light levels. During the night a high efficiency 180 lumensper-watt white LED illuminates. The brightness of the LED is regulated by a pulse-width-modulation driver circuit, the LED remains at a low light level until activated by the passive infrared (PIR) sensors. The PIR sensors have a detection range of up to 5m, on approach the LED brightens for 10 seconds, gently dimming to the low level.

The Solispost control unit is fully sealed and uses IPX7 connectors.

SOLAR PANELS SPECIFICATION

Power: 17.2W (4 x 4.3W panels) Material: Polycrystalline Silicon Construction: Photovoltaic cells sealed behind UV stabilised tempered glass. Total Area: 102,300mm²

BATTERY SPECIFICATION

Type: AGM VRLA - Lead Acid Battery Capacity: 6V 10Ah Lifetime: up to 5 years at 20°C Operating Temperature: -20 to +60°C Transportation: Meets all requirements of the International Air Transport Association (I.A.T.A Dangerous Goods Regulations). Low maintenance Excellent recovery from deep discharge. Conforms to BS EN61056-1 and IEC1056-1 regulations.

LIGHT EMITTING DIODE (LED) SPECIFICATION

Colour Temperature: 3700K to 5000K CRI: 75 Max Current: 520mA Max LED Power: 1.43W 180 lumens per watt

PIR SENSORS SPECIFICATION

Type: Passive infrared sensor Range: up to 5 metres Detection Angle: 120°

MATERIALS SPECIFICATION

Cap and lid Die-cast aluminium, to BS EN 755-2:2013 Post and chassis Extruded aluminium to BS EN 755-9:2001

Processing CNC machining with cutter heads using mineral-based coolant

Finishing Powder coating to PE54/TRB7202/5/180/ST IP rating 66 (ingress protection)



DIMENSIONS

(All dimensions in mm)

GROUND FIXING OPTIONS

Surface Sub-surface (adjustable) Buried

LIGHT OUTPUT





Tape measure 2000mm



Tape measure 3000mm

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